

## Angiogram

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### WHAT IS AN ANGIOGRAM?

An angiogram (also known as an arteriogram) is an x-ray examination of your arteries (blood vessels). A specially trained doctor, known as an Interventional Radiologist, performs this x-ray procedure. During the angiogram, a catheter (a small tube) is placed into an artery in your groin or arm. Contrast or x-ray dye is injected into the vessel to take pictures of the area.

### WHY DO I NEED AN ANGIOGRAM?

1. You may be having symptoms that suggest a blockage of an artery.

For example:

A blocked artery in your leg may cause pain in your leg when you walk.

Blocked kidney arteries may cause high blood pressure.

Blocked arteries to the brain may cause vision problems and weakness.

An angiogram can identify exactly where the artery is blocked, how severe the blockage is, and what is causing the blockage. The two most common causes of blocked arteries are blood clot or hardening of the arteries.

2. You may have an aneurysm in your body. This is an area of an artery that has ballooned out. An angiogram may be necessary to see it in detail and to plan treatment.

3. May be used to diagnose difficult problems not resolved by other tests.

4. Sometimes used by surgeons to help plan the extent of an operation or to help choose the best surgical

procedure for you.



**HOW DO I PREPARE FOR THE PROCEDURE?**

If you are already a patient in the hospital, your doctors and nurses will provide you instructions. If you are to be admitted to the hospital after this procedure, please follow these listed instructions. An Angio nurse will attempt to call you 1-2 days before your scheduled appointment, to review these instructions, obtain pertinent medical information, and answer questions and concerns you may have

1. No solid food after midnight. You may have clear liquids.
2. Take your medications as usual. If you are on glucophage, insulin, or a blood thinner, contact our department ASAP so we can adjust your dosage.
3. If you are allergic to x-ray or contrast dye, notify our department ASAP, so that necessary precautions can be undertaken.
4. Bring all your medications with you on the day of the procedure.

**WHAT HAPPENS BEFORE THE PROCEDURE?**

1. The nurse and Interventional Radiologist will talk with you about the procedure in detail, answer your questions, and ask you to sign a consent form.
2. You will be asked to put on a hospital gown, and remove anything metal, such as jewelry.
3. Your family or significant other will be asked to go to our designated waiting area.
4. An IV will be started for fluids, pain, and sedation medications.
5. You may also need labwork drawn prior to the procedure.

**WHAT HAPPENS DURING THE PROCEDURE?**

You will be taken into our procedure room, where you will be positioned on the xray table. You will be hooked up to a monitor so your blood pressure, heart rate, and oxygen level can be watched closely. An area of your groin or upper arm will be shaved to reduce the chance of infection where the catheter will be inserted. Betadine (a brown colored soap) will be used to wash this area. Lidocaine or Xylocaine (the same medication a dentist uses) will be injected to numb the skin and deeper tissues. It will sting and burn for a few seconds before the area becomes numb. You may still feel pressure. The nurse will also be present to administer the pain and sedation medication. The radiologist will guide the catheter through your body to the artery that is being studied by watching it on a screen. You will not feel the catheter moving through your arteries. When the catheter is in the correct position, contrast (xray dye) will be injected through the catheter while pictures are taken.

You will feel warm inside, get a funny metallic taste in your mouth, or feel the urge to urinate. This only lasts 10-15 seconds. Because you need to hold your breath during some x-rays, you will need to be awake; however, you will be given medication to help you relax and any pain medication if needed by your nurse. Several sets of x-rays are needed to complete the test. These films are reviewed by the radiologist and findings discussed with your referring doctor. If there is an area of narrowed artery that may be helped by balloon angioplasty, this may be done at this time. The angiogram usually takes 2-3 hours to complete.

#### **WHAT HAPPENS AFTER THE PROCEDURE?**

After the exam is complete, you will be taken to the recovery room where the Interventional Radiologist will remove the catheter from your artery. This does not hurt. Pressure is held for 10-20 minutes on the insertion site is healed and the bleeding stops. If the groin is used, a bulky dressing will be applied. You will need to lay flat for the next 6 hours, keeping your head down, not bending the leg used for the insertion of the catheter. You will be instructed to hold pressure to that groin if you have to cough, sneeze, or laugh. This will decrease your risks of bleeding and allow the puncture site to heal. Also, if the dressing feels warm or wet, hold pressure and call for the nurse. If the arm is used a sling will be applied. This can be removed the following morning. If your arm feels numb or you cannot move your fingers, call for the nurse.

Next you will be sent to your hospital room, where the nursing staff will continue to monitor your vital signs, pulses in your feet, and your puncture site for bleeding. After the six hours are up, your head may be raised 15 to 30 degrees; however, you will need to stay in bed until the next morning. You may eat your usual diet, unless your physician has other tests scheduled. If you meet the discharge criteria, you may go home. You will need someone else to drive you.

#### **WHAT TO DO AFTER I GO HOME?**

1. Relax and take it easy for 24 hours.
2. Drink plenty of fluids.
3. Resume your regular diet.
4. Keep a Band-Aid on the catheter insertion site for the next 24 hours.
5. No shower or hot bath for 24 hours.
6. No driving or operating machinery for at least 48 hours.
7. No strenuous exercising or lifting for at least 2 days..
8. No smoking for at least 24 hours.

#### **PROBLEMS YOU MAY EXPERIENCE AND WHAT TO DO:**

1. In case of bleeding, or the appearance of a large growing lump where the catheter was inserted.

- a. Apply firm pressure to the site.
- b. Call 911 or local ambulance for transport to the nearest emergency room.
2. There is a numbness, coolness, or a change in the color of the arm or leg where the catheter was inserted, go to the nearest emergency room.
3. If a urinary catheter was used during your hospital stay, call your doctor if you notice burning upon urination, frequency of urination, pain or fever.

#### **WHAT ARE THE RISKS OF AN ANGIOGRAM?**

With modern techniques, angiography is safe. However, because the exam includes the use of catheters in your arteries and the use of contrast injection, there is some risk to you.

Placing a catheter in your artery, can damage it. Even when it has not been damaged, you may have a bruise or small lump where the catheter was inserted. The bruise or lump may be sore, but will go away if a few days to a week.

A few patients get ill from the contrast injection. Patients with diabetes, kidney disease, asthma, or previous allergic reaction to contrast (x-ray dye) tend to get sick more often. If you have one of the above conditions, please let your Interventional Radiologist know before your procedure begins.

Other complications can occur. What they are depends on what artery is being studied. The exact risks of your angiogram will be discussed with you in more detail a member of the interventional radiology team before your procedure begins.

#### **WHAT IS THE BENEFIT OF HAVING AN ANGIOGRAM?**

The benefit of angiography is that it can give your doctors exact information about your arteries and help them plan the best treatment for you.

#### **FOR ANY QUESTIONS OR CONCERNS?**

##### **PLEASE CALL:**

**DAYTIME:** UVa Angio/Interventional Radiology Department at (804) 924-9401

**NIGHTS OR WEEKENDS:** UVa Emergency Room and ask for the Angio/Interventional Radiology Fellow on call (804) 924-9400

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